

REMARKS

This paper is being submitted in response to the Office Action mailed in the application on December 14, 2004. Claims 1-22 are pending. Claims 1, 2, 3; 6, 8, 13, 15, 20 and 21 have been amended and claim 22 has been cancelled without prejudice by this Amendment.

The Examiner has rejected applicant's claims 1, 4, 6, 8, 11, 13, 15, 18, 20 and 22 under 35 U.S.C. § 102(b) as being anticipated by Takei (U.S. Patent No. 5,831,672). The Examiner has rejected claims 5, 12 and 19 under 35 U.S.C. § 103(a) as being unpatentable over the Takei patent. Applicant has cancelled claim 22, thereby rendering the Examiner's rejection thereto as moot. With respect to applicant's claims 1, 4-6, 8, 11-13, 15, and 18-20, as amended, the Examiner's rejections are respectfully traversed.

Applicant's independent claims have each been amended to clarify the features of applicant's invention. Particularly, claims 1, 6, 8, 13, 15 and 20 have been amended to recite a white balance correcting device or method, or a storage medium which stores a program for executing a process for correcting white balance, comprising an image pickup device or step which picks up image signals of an image pickup plane, and a dividing part or step which divides a scope of the image pick up plane into a plurality of blocks. Applicant's independent claims have been further amended to recite a peak value acquiring part or step which acquires a peak value of brightness and color signal values corresponding to the peak value of brightness obtained in each of all of the plurality of blocks divided by said dividing part and an average value calculating part or step which calculates an average value of brightness and average values of color signal values obtained in each of all of the plurality of blocks divided by said dividing part. Such construction is neither taught nor suggested by the cited reference.

With regard to claim 1, the Examiner argues that Takei discloses a white balance correcting device for correcting white balance of picked-up image signals, comprising an image pickup device (1); peak value acquiring part which acquires a peak value of brightness and color signal values corresponding to the peak value of brightness obtained in a predetermined region of the image signals by the image pickup device; average value calculating part which calculates an average value of brightness and average values of color signal values obtained in a predetermined region of the image signals by the image pickup device; comparison part which makes comparison between brightness information of the average value and the peak value; selection part which selects either of the values obtained by the average value calculating part or the values obtained by the peak value acquiring part according to comparison result by the comparison part; and white balance control part which controls white balance on the basis of values selected by the selection part.

In addition, according to the Examiner, "the predetermined region for the average calculations inherently includes the predetermined region for the peak calculations since Takei uses the whole image sensor as the predetermined region for the average calculations and then uses the blocks from the predetermined region that were considered to be in the white extracting area when determining the peak values" (emphasis added). Applicant's claims 6, 8, 13, 15 and 20 have been similarly rejected.

Applicant submits that Takei fails to teach or suggest the white balance correcting device, method, or storage medium as recited in applicant's claims 1, 6, 8, 13, 15 or 20, as amended. Particularly, the Takei patent fails to teach a structure in which a scope of the image pickup plane is divided into a plurality of blocks, including a peak value acquiring part which acquires a peak value of brightness and color signal values corresponding to the peak value of

brightness obtained in each of all of the plurality of blocks divided by the dividing part, and an average value calculating part which calculates an average value of brightness and average values of color signal values obtained in each of all of the plurality of blocks divided by the dividing part.

In Takei, each frame is divided into regions or blocks, as shown in Fig. 8. However, Takei does not use all of the blocks of the image pickup plane when detecting the maximum or peak brightness level. Rather, as noted by the Examiner, when the maximum brightness level is computed, Takei only uses the blocks where the white part was determined to exist by white extraction in the first calculation (Col. 15, lines 27-30). Takei does not detect a maximum brightness level or peak value from any block in which the white cannot be extracted in the white extraction of the average values.

When the white part of an image is very small relative to the background, the average of color signal values of the image is more biased to chromatic color in the background than white color, as described on page 6, line 18-page 7, line 4 and shown in Fig. 12 of applicant's specification. The Takei device does not teach using the block including the small white part in detecting the maximum brightness level, and therefore cannot extract white as a maximum brightness level. In contrast, applicant's invention teaches using all of the blocks into which the scope of the image pickup plane is divided when acquiring the peak brightness value and when calculating the average values of brightness and of color signal values, thereby achieving optimum white balance, particularly in the case where the white part is small relative to the background of an image.

The Examiner has acknowledged that claims 2, 3, 7, 9, 10, 14, 16, 17 and 21 are directed to allowable subject matter and has indicated that they would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Applicant respectfully submits that amended independent claims 1, 6, 8, 13, 15 and 20 are patentable over the cited Takei patent for the reasons set forth above. In view of applicant's amendment of independent claims 1, 6, 8, 13, 15 and 20, applicant's claims 2, 3, 7, 9, 10, 14, 16, 17 and 21 are therefore also submitted as patentable. Reconsideration of the claims is respectfully requested.

If the Examiner believes that an interview would expedite consideration of this Amendment or of the application, a request is made that the Examiner telephone applicant's counsel at (212) 790-9278.

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Respectfully submitted,

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